



JACKSON ENERGY COOPERATIVE

A Touchstone Energy Cooperative 

115 Jackson Energy Lane
McKee, Kentucky 40447
Telephone (606) 364-1000 • Fax (606) 364-1007

RECEIVED

MAR 19 2013

PUBLIC SERVICE
COMMISSION

March 18, 2013

Director of Engineering
Kentucky Public Service Commission
211 Sower Blvd.
PO Box 615
Frankfort, KY 40602-0615

Re: Jackson Energy Cooperative: 2012 Annual Reliability Report
Administrative Case No. 2006-00494

Jackson Energy Cooperative respectfully submits the 2012 Annual Reliability Report per the order dated October 26, 2007 in Administrative Case No. 2006-00494.

Please inform me if any further information is required.

Sincerely,



Derrick Dean
Chief Operations Officer

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	1.1	Jackson Energy Cooperative
REPORT PREPARED BY	1.2	Derrick Dean
E-MAIL ADDRESS OF PREPARER	1.3	derrickdean@jacksonenergy.com
PHONE NUMBER OF PREPARER	1.4	606-364-9244

SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2.1	2012
-------------------------	-----	------

SECTION 3: MAJOR EVENT DAYS

T_{MED}	3.1	13.244
FIRST DATE USED TO DETERMINE T_{MED}	3.2	1/1/2008
LAST DATE USED TO DETERMINE T_{MED}	3.3	12/31/2012
NUMBER OF MED IN REPORT YEAR	3.4	3

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY RESULTS

Excluding MED

SAIDI	4.1	169.4755
SAIFI	4.2	1.5501
CAIDI	4.3	109.331

Including MED (Optional)

SAIDI	4.4	283.5456
SAIFI	4.5	1.8095
CAIDI	4.6	156.6988

Notes:

- 1) All duration indices (SAIDI, CAIDI) are to be reported in units of minutes.
 - 2) Reports are due on the first business day of April of each year
 - 3) Reports cover the calendar year ending in the December before the reports are due.
 - 4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, CAIDI, and T_{MED}
-

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 5: OUTAGE CAUSE CATEGORIES

Excluding MED

CAUSE CODE DESCRIPTION	SAIDI VALUE	CAUSE CODE DESCRIPTION	SAIFI VALUE
Tree/Limb out of ROW 5.1.1	51.4074	Tree/Limb out of ROW 5.2.1	0.4034
Major Storm 5.1.2	28.2112	Unknown Cause 5.2.2	0.3107
Unknown Cause 5.1.3	22.0850	Lightning 5.2.3	0.1578
Lightning 5.1.4	14.0947	Equipment 5.2.4	0.1167
Equipment 5.1.5	12.8126	Major Storm 5.2.5	0.1129
Planned 5.1.6	10.0569	Planned 5.2.6	0.1082
Tree/Limb in ROW 5.1.7	5.0995	Vines/Kudzu 5.2.7	0.0489
Squirrel 5.1.8	3.8742	Squirrel 5.2.8	0.0477
Animal / Bird 5.1.9	3.8049	Animal / Bird 5.2.9	0.0468
Wind 5.1.10	3.4446	Tree/Limb in ROW 5.2.10	0.0405

SECTION 6: WORST PERFORMING CIRCUITS

CIRCUIT IDENTIFIER	SAIDI VALUE	MAJOR OUTAGE CATEGORY
Maplesville - McWhorter F1 6.1.1	936.7434	Tree/Limb in ROW
Greenbriar - Fox Hollow F4 6.1.2	879.8130	Tree/Limb out of ROW
Keavy 2 - Locust Grove F5 6.1.3	614.1465	Tree/Limb out of ROW
Sand Gap - Clover Bottom F2 6.1.4	594.0172	Tree/Limb out of ROW
Keavy 2 - Bald Rock F4 6.1.5	575.8863	Unknown Cause
East Bernstadt - Hazel Green F1 6.1.6	560.4723	Major Storm
Beattyville - St. Helens F2 6.1.7	517.5781	Equipment
Goose Rock - Schoolhouse F4 6.1.8	475.1387	Major Storm
East Bernstadt - Ft. Sequayah F4 6.1.9	474.6290	Lightning
South Fork - Bear Run F1 6.1.10	439.5082	Tree/Limb out of ROW

CIRCUIT IDENTIFIER	SAIFI VALUE	MAJOR OUTAGE CATEGORY
Keavy 2 - Bald Rock F4 6.2.1	6.4604	Unknown Cause
Maplesville - McWhorter F1 6.2.2	6.0987	Tree/Limb in ROW
Greenhall - New Zion F3 6.2.3	5.4665	Tree/Limb out of ROW
Millers Creek - Cobb Hill F1 6.2.4	4.9079	Major Storm
Millers Creek - Youth Haven F2 6.2.5	4.7554	Major Storm
Laurel Ind. 2 - Hawk Creek F4 6.2.6	4.6727	Unknown Cause
Greenbriar - Fox Hollow F4 6.2.7	4.4848	Tree/Limb out of ROW
Maretburg - Sand Springs F3 6.2.8	4.4223	Unknown Cause
South Fork - Bear Run F1 6.2.9	4.3388	Tree/Limb out of ROW
Sand Gap - Clover Bottom F2 6.2.10	4.2350	Tree/Limb out of ROW

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

Additional pages may be attached as necessary

SECTION 7: VEGETATION MANAGEMENT PLAN REVIEW

Jackson Energy maintains an aggressive Vegetation Management Plan clearing approximately 800 miles of right-of-way annually, which also includes herbicide treatment on all cleared circuits the following year. This has allowed us to maintain a clearing cycle that is less than 6 years.

However, our service territory is heavily wooded and within the National Forest and our maximum ROW width of 40' does not prevent the majority of the outage category "Tree/Limb out of ROW" identified in Section 6. We continue to utilize our Hazard Tree Program that identifies these trees "out of ROW". The hazard trees identified are removed (with property owners permission) during the normal clearing cycle.

A copy of our current Vegetation Management Plan is attached for review.

SECTION 8: UTILITY COMMENTS

The majority of the outage time, and consumers affected, for Keavy 2 - Bald Rock F4 was due to 2 outages that involved the entire feeder. On 7-25-201, 2 the entire feeder was out. JEC also had outages in the neighboring county due to lightning. On 11-17-2012 the entire feeder was out.

Laurel Industrial 2 - Hawk Creek F4 experienced an outage on 5-22-2012 that affected the entire feeder. A cause could not be found for the outage. JEC also had outages on another substation in the same county, at the same time, due to lightning.

Maretburg - Sand Springs F3 experienced 3 outages that affected the entire feeder. After each of the outages, a thorough search was conducted for a possible cause. During this time the station recloser had a High Current Lockout (HCL) setting in place. Any fault current above the HCL setting caused the station recloser to lockout in one shot mode. The idea behind this is to protect the station transformer from repeated high fault current during a fault condition. After these outages, the station recloser setting was changed so as to eliminate the HCL setting. Since then the feeder has not been out due to an unknown cause. Maretburg Station has a history of bird related problems. The substation owner, EKPC, has had to replace most of the equipment leads with insulated conductor due to bird contacts inside the substation.

Maplesville - McWhorter F1: Hazard tree identification in 2011 and full circuit cut last of 2012. The majority of the outages for this circuit occurred prior to when the circuit clearing took place last year.

Greenbriar - Fox Hollow F4: Hazard tree identification in 2012 and trees cut January 2013.

Keavy 2 - Locust Grove F5: Hazard tree Identification in 2013 and full circuit will be cut 2014.

Sand Gap - Clover Bottom F2: Hazard tree identificatin in 2013 and full circuit will be cut 2014.

South Fork - Bear Run F1: Hazard Tree Identification in 2012 and full circuit will be cut 2013.

Greenhall - New Zion F3: Hazard Tree Identification in 2013 and hazard trees to be cut 2013.

Jackson Energy Cooperative
Engineering & Operations Department
115 Jackson Energy Lane
McKee, KY 40447
606-364-1000

VEGETATION MANAGEMENT PLAN
GUIDELINES, METHODS
AND PROCEDURES

Revised: January 2013

TABLE OF CONTENTS

<u>Item</u>	<u>Description</u>	<u>Page</u>
1.0	<u>Definitions</u>	3
2.0	<u>Bidder's Qualifications</u>	4
3.0	<u>Instructions to Bidders</u>	4
4.0	<u>Introduction: Guidelines and Evaluation Methods</u>	6
5.0	<u>General Requirements</u>	7
6.0	<u>Work</u>	8
7.0	<u>Notification/Authorization to Trim or Remove Trees</u>	9
8.0	<u>Right of Way Clearing/Re-clearing Requirements</u>	12
9.0	<u>Options for Refusals/Reluctance to Yield Right-of-Way</u>	13
10.0	<u>Use of Chemicals and Sprays</u>	14
11.0	<u>Safety to Employees and the Public</u>	16
12.0	<u>Work Assignments</u>	17
13.0	<u>Supervision of Work and Workmanship</u>	18
14.0	<u>Contractor Caused Outages</u>	19
15.0	<u>Payment for Work</u>	19
16.0	<u>Hazard Tree Mitigation Project</u>	20
17.0	<u>Indemnification</u>	20

Section 1.0 Definitions

- A. "JEC" shall mean Jackson Energy Cooperative.
- B. "Contractor" shall mean the successful Bidder to whom a Contract is awarded.
- C. "Work" shall refer to everything agreed to be done and furnished by the Contractor including all supervision, supplies, labor, transportation and equipment together with all responsibilities and obligations imposed by the Contract Documents.
- D. "Equipment" shall mean the trucks, trailers, tools, saws, and other apparatus which are owned and operated by the Contractor and which are required to be maintained by the Contractor for the performance of the Contract in accordance with the Specifications.
- E. "Specifications" shall mean all specifications pertaining to the Work to be performed.
- F. "Contract" shall mean the fully executed document which binds the interested parties in an agreement to fulfill all terms, conditions, and specifications.
- G. "Invitation for Bids" shall be the means by which JEC solicits bids from Pre-qualified Contractors for Work which JEC may from time to time deem necessary to have performed.
- H. "Install", "Furnish", "Provide", or words of like import shall mean the Contractor shall install, furnish, or provide, and similarly the words "Approved", "Authorized", "Required", "Satisfactory", "Acceptable", or words of like import shall mean, as applicable, approved by, authorized by, required by, satisfactory to, or acceptable to JEC, unless otherwise expressly stated.
- I. "Prequalified Contractor" shall mean a contractor who is determined by JEC to be eligible to bid on the Work, subject to any of JEC's conditions, but such status shall not imply or infer compliance with any of the requirements of the Contract, Specifications or other Contract Documents.
- J. "Tree" shall mean any woody vegetation with a DBH of 4 inches or greater.

K. "Brush" shall mean any vegetation with a DBH of less than 4 inches.

Section 2.0 Bidder's Qualifications

- 2.1 Bids will be accepted only from well established and qualified licensed contractors, trained and experienced in the clearing of power line rights of way and tree trimming that have been approved by JEC as a Pre-qualified Contractor. No bid will be considered from any Contractor unless they are known to be skilled and were previously engaged in work of a character and scope consistent with these bid specifications.
- 2.2 Bidders must show that their equipment and facilities are sufficient and their workload so arranged as to meet the schedules called for by the Contract without the use of subcontractors. In order to aid JEC in determining the responsibility of any Bidder, the Bidder shall furnish evidence, satisfactory to JEC, of the Bidder's qualifications, experience and familiarity with work of the character specified and his or her financial ability to properly prosecute the proposed work to completion.
- 2.3 Unless previously approved, each Bidder shall submit to JEC a Contractor's Prequalification Application Form, available at JEC's office, and must be subsequently approved by JEC as a Pre-qualified Contractor in order to receive a formal Invitation to Bid. JEC will only accept bids from Bidders who have been approved by JEC as a Pre-qualified Contractor.

Section 3.0 Instructions to Bidders

- 3.1 Bids that are sent by U.S. Postal Service or private carrier shall be clearly marked "**BID ENVELOPE ENCLOSED**". The bid shall be sealed in a separate envelope and shall have the following information shown on the outside of the envelope:

BID FOR: Power Line Right of Way Clearance and Tree Trimming

BID DUE: 12:00 p.m. November 1st, 2012

OWNER: Jackson Energy Cooperative

BIDDER: _____

Envelope must be addressed and submitted to:

Jackson Energy Cooperative
ATTN: Mr. Eddy Neeley
115 Jackson Energy Ln.
McKee, Kentucky 40447

Any bid not conforming to these requirements will not be considered.

- 3.2 Before submitting a bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the system to become familiar with local conditions that may in any manner affect cost, progress, or performance of the work, (c) have knowledge of all federal, state and local laws, ordinances, rules and regulations affecting performance of the work, and (d) carefully correlate the Bidder's observations with the requirements of the Contract Documents.
- 3.3 Each bid shall be carefully prepared in accordance with the JEC Specifications referenced in the Contract Documents.
- 3.4 Each bid shall be signed by a representative of the Bidder who is authorized to make contractual obligations for the Bidder and shall give the Bidder's full business address. Bids by partnerships shall be signed with the partnership name followed by the signature and designation of one of the partners or other authorized representative.
- 3.5 Bids by a corporation shall be signed in the name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind the corporation. The name of all persons signing shall also be typed or printed.
- 3.6 Sealed bids will be opened in private the day the bids are due. Contractors will be notified of any awarded work after Board approval.
- 3.7 JEC reserves the right to reject any and all bids, waive any and all technicalities therein, disregard all nonconforming or conditional bids, and evaluate and award bids on other than a low bid basis. By submission of a bid, Bidder thereby agrees to these stipulations and will not challenge JEC's decisions.
- 3.8 JEC may conduct such investigations as it deems prudent to establish the responsibility, qualifications, and financial ability of the Bidders. JEC's final selection of the best overall bid submitted, as determined solely by JEC, shall be based upon factors such as: financial stability of bidder; personnel experience and training; surveys of current and previous employers and previous work history with JEC; overall quality of equipment and organization; ability to adequately

serve JEC with full coverage, customer responsiveness and complaint processing; employee safety training, safety compliance and procedures, including drug-free workforce initiatives, etc.

- 3.9 If the Contract is awarded, JEC will give the successful Bidder due notice of award after its Board of Directors meeting on or after **December 05, 2012**. Work is expected to commence on this Contract **on or after January 1, 2013**, unless otherwise approved at JEC's option.
- 3.10 JEC may elect during the term of this Contract to award one (1) or more additional contracts for rights of way clearance and tree trimming via alternative contractual arrangements such as hourly rates, unit cutting, zone clearing, or lump sum cost for circuit trimming. Nothing contained herein shall be construed as prohibiting JEC from awarding such additional contracts as it deems necessary for the continued safe operation and maintenance of its electric distribution system.

Section 4.0 Introduction: Guidelines and Evaluation Methods

In order to maintain line clearance for public safety and electrical reliability, Jackson Energy Cooperative regularly undertakes tree pruning and herbicide activities. These activities are required in order to be compliant with NESC, as well as Kentucky Revised Statute, and guidelines promulgated by OSHA. This guide details the methods and guidelines which JEC uses to accomplish that goal.

Goal:

The goal of our right-of-way clearance program is to maintain line clearance for public safety and electric reliability.

Strategy:

Our strategy for clearing and maintaining line clearance is to arrange the entire system in operable units, defined by individual circuits or substations, and to operate line clearance activities on those units in a regular and scheduled manner.

Tactics:

The tactics involved are detailed in the following Guidelines. At the development stage of Jackson Energy's vegetation management plan, circuits were prioritized on the basis of last available date of trimming, and vegetation conditions found by onsite circuit inspections which occur incidentally throughout the year as a part of normal activities to determine circuit condition. Reliability, measured by the number of tree related outages expressed on a per circuit mile basis was further used to identify circuits which should be cleared the soonest, with the highest going first and so on. Circuit outages due to trees are regularly reviewed to

determine if any adjustment of the trimming cycle to address changing conditions on the circuit is warranted. Onsite inspection further allows adjustment of these time frames should extraordinary circumstances warrant such an adjustment. Examples of such circumstances are: insect infestation damage (Southern Pine Beetle, etc), heavy forest fire damage which will result in tree losses throughout the circuit, or weather related instances. The effectiveness of the plan is evaluated by the reduction of the frequency of tree related outages, and the duration of tree related outages on the treated circuit. This is monitored by the contribution of tree related outages to both customer and system average interruption indices (SAIDI, SAIFI, and CAIDI). Reports generated by the dispatch Outage Management System (OMS) identify these circuits and the nature and frequency of outages. These reports are given daily, as well as accumulated monthly and annually to better define units needing attention.

Jackson Energy Cooperative conducts clearing activity in each circuit feeder to one full circuit clearing, encompassing floor, side and shade tree trimming each six years. Circuits and new construction units are then scheduled for chemical treatment to reduce floor vegetation within two years of full circuit clearing.

Section 5.0 General Requirements

- 5.1 Bidders shall be trained and licensed in the handling and use of chemicals and sprays, and shall furnish evidence of the same, for foliage, basal, and tree stump applications. Evidence shall include, without being limited to, the Bidder's Commercial Applicator's License Number certified in Category 6 - Right of Way from the Kentucky Department of Agriculture.
- 5.2 If a Contractor utilizes a Hispanic work force they shall have a general foreman capable of speaking Spanish. At least one member of every crew, ideally the working foreman shall be capable of speaking English in order to answer any questions a landowner or a representative of JEC might have.
- 5.3 A contract crew shall consist of all necessary personnel and all necessary tools and equipment as outlined in the Contractor's Pre-qualification Application Form, to safely and efficiently complete the work. JEC reserves the right to do any Work covered within this Contract by its own forces, to have such Work performed by other contractors, to cause such Work to be completed by other means, or to defer any Work to a future date.
- 5.4 Since Contractor(s) employees come in contact with JEC customers, they shall be completely dressed in suitable clothing which shall be clean at the beginning of each day. Identification badges or other forms of identification which displays the Company's name, contact information, position, etc. is required and must be shown to the customer upon request.
- 5.5 All motor trucks and other vehicles provided by the Contractor to perform the

Work shall bear the Contractor's number and shall be well marked and identified with company insignia or name designating the vehicles as property of the Contractor.

- 5.6 Contractor shall observe all generally recognized safety rules (including without limitation the provisions of the National Electrical Safety Code and ANSI Z133.1 - 2000 or latest edition thereof), regulations, and methods to prevent injury to all employees and other persons or damage to property of JEC or the public arising from its operations. Contractor shall observe all laws and regulations applicable to its operations including without limitation OSHA requirements, Kentucky Department of Transportation requirements, and Kentucky Department of Agriculture requirements.
- 5.7 Contractor shall secure from JEC information as to the nature of the electric circuits involved in all cases prior to commencement of Work in each area. Contractor acknowledges that JEC's electric circuits are to continue in normal operation during this Work, and Contractor shall provide and use all protective equipment necessary for the protection of its employees and to guard against interfering with the normal operation of these electric circuits. If a line is interrupted or damaged caused by work from this operation the Contractor will be responsible for cost of repairing and restoring that line.
- 5.8 Contractor shall immediately notify JEC of any irregular situations observed on JEC's system, including, without limitation, equipment or facility malfunctions, actual or potential safety problems, loose or sagging guy wires, damaged conductors, leaking transformers, damaged or defective poles, and any other seemingly unusual circumstance encountered by the Contractor.
- 5.9 If, during the term of the Contract, additional hourly crews or workers are needed to perform right of way clearing, tree trimming, chemical applications, JEC will first request such crews or workers from the Contractor then working for JEC. Should the Contractor fail to furnish additional crews or workers upon thirty (30) days written notice, JEC shall have the right to obtain additional crews or workers from other resources.
- 5.10 Contractor shall promote a drug and alcohol free working environment.
- 5.11 Contractor(s) shall not perform or solicit any type of private tree trimming work on customer's property while actively engaged in performing work for JEC under this contract until all work on the circuit is completed.

Section 6.0 Work

- 6.1 Contractor shall perform all Work to the complete satisfaction of JEC and in accordance with all municipal, county, state and other local laws, ordinances, and

regulations applicable to Work of this character and nature. All Work performed by the Contractor is subject to inspection and approval by JEC. Any Work not meeting the minimums as set forth in these Specifications, or generally accepted line clearance standards, or Work which has been falsely represented in any fashion by Contractor shall be redone by the Contractor at no (zero) cost to JEC. Failure by JEC to inspect Contractor's Work shall in no way relieve the Contractor from any obligations, liabilities, or responsibilities in connection with the Contract.

- 6.2 Contractor agrees to provide adequate notice and if possible, obtain consent, for the necessary work from the property owner or public authorities having ownership or control over each tree to be trimmed or removed and/or all property to be cleared or sprayed. Contractor shall discuss with the property owner the type of work to be performed, identifying any and all trees that need to be trimmed or removed, the disposal of brush, any areas that need to be sprayed, and the proposed route of all vehicles and equipment traveling over the owner's property. When property owners cannot be contacted, door hangers shall be left to inform them that Contractor was present to trim trees. Hangers shall contain information as Company Name, Phone Number, etc. Whenever permission to do any work cannot be obtained, JEC shall be informed of the situation.
- 6.3 Contractor shall certify that complaints of any nature received from property owners or public authorities resulting from this Work will receive immediate attention and that all efforts will be made to effect a prompt adjustment. If any damage is done to the property of others by Contractor's workforce, Contractor shall repair and restore at its sole expense any such property and correct any damage inflicted thereto, all to the complete satisfaction of the owner(s) of the injured property. All complaints, and any action taken by Contractor in connection with such complaints, shall be reported to JEC.
- 6.4 Contractor shall secure all permits and licenses necessary for the Work to be performed and pay all charges and fees required for such permits and licenses.
- 6.5 Contractor(s) shall provide sufficient crews to complete the work in the specified time period. However, JEC expects that after work has begun on specified circuits, the Contractor's operation will progress on a continued basis with necessary staffing levels to complete the required circuit miles by the end of the term of the contract, which is **December 31, 2012**. Crew size, crew structure, crew equipment, and the need for any additional crews under this contract will be at the Contractor's sole discretion. Any work not completed by the specified date must still be completed by the Contractor. The inability to finish the work on time will also be considered and noted before any future bid work is granted to that Contractor.

Section 7.0 Notification/Authorization to Trim or Remove Trees

- 7.1 The Contractor shall provide the property owner(s) with notification of intent to conduct the required right-of-way clearance and cut stump herbicide application work. This contact shall precede any work done on any property. The work will then be scheduled for each crew. Any line clearance work done without proper notification must have specific approval by the authorized Jackson Energy representative. Jackson Energy must have **10 business days** notice requesting notification calls be sent by our automated machine before any contact takes place.
- 7.2 Verbal notification of the property owner for routine line clearance work is sufficient. If the property owner is not home, a notification card may be left on the door. Notification cards shall not be placed in any U.S. mailboxes. Notification cards shall only be used where the owner is likely to be present on site on a regular basis. Absentee owners may be notified by mail or by phone.
- 7.3 In the case of the industrial, municipal, county, state, or large private estate type of properties, the caretakers or other designated individual in the employ of the owners who is responsible for the trees or brush to be cut or trimmed is considered to represent the interest of the owner. Notification of such caretakers or grounds maintenance supervisors is sufficient.
- 7.4 For both bid and T&M crews, the contractor shall maintain a written daily log of all property owner notification and/or refusals by personal contact, letter, phone call, and notification card. The log shall include a record of the date of initial contact, party contacted, address, any agreements entered or understanding reached, and any follow-up conducted. Contractor shall make an attempt to have landowner/member sign log sheet. Contractor shall also keep appropriate maps marked to reflect current **daily** progress for all projects/substation circuits.
- 7.5 If landowner refuses access, Contractor shall notify authorized Jackson Energy representative immediately.

Section 8.0 Right of Way Clearing/Re-clearing Requirements

- 8.1 Work within the boundaries of this project shall include clearing/re-clearing. The work may be performed on both urban/residential and rural sites where a specified or desired right-of-way shall be established, reestablished and maintained. Trimming shall adhere to ANSI A300 guidelines and OSHA Safety regulations. If the crown of a tree or any branches are within the right-of-way boundaries, even though the base of the tree is outside of the right-of-way boundary, this tree will be considered as part of the Bid Project and shall be removed or trimmed to meet the guidelines (i.e. overhang from a tree outside of right of way).
- 8.2 Techniques consistent with the practices of directional, natural, lateral, and drop crotch trimming should be utilized. Drop crotch pruning consists of reducing tops, sides, or individual limbs and avoids cutting back to small suckers. Directional

pruning or trimming shall be used to direct or train future tree growth or sprouting away from the wires. Tree trimming required on coniferous trees (pine, spruce, hemlock, etc.), along the established tree edge shall involve the removal and/or trimming of limbs that are encroaching the right-of-way. Removal of the limbs will be back to the main stem, trunk, and/or to suitable live lateral branch.

- 8.3 The practices of “shearing”, “flat-topping”, “pollarding”, “stubbing”, and “rounding over” shall not be permitted anywhere along Jackson Energy’s lines.
- 8.4 Right of way clearing and tree trimming shall be performed on all primary lines. All tree trimming on right-of-way boundaries shall be ground to sky. Tree removals will be concentrated to trees that may pose a threat to primary lines (i.e. danger trees), trees of a fast growing species (i.e. maples, and poplars) and trees requested by landowners to be removed within the Row. Trees that are outside of the Row will be trimmed to obtain proper clearance. Contractors are not responsible for tree removals requested by landowners that are outside of the Row unless such trees are hazard trees. Emphasis shall be placed on removing trees in the 4-12 inch range, where approval is granted by the property owner. Trees larger than 4-12 inch shall be trimmed if reasonable clearance can be obtained to avoid contact with primary lines until the next trim cycle, unless otherwise requested by the landowner.
- 8.5 Where trimming only is permitted, the lateral pruning method shall be employed. Clearances following our right of way widths for single and three phase lines shall be obtained wherever possible. Trees where landowners may refuse to allow these clearances shall have clearances that will provide a minimum of ten (10) feet of unobstructed space (any direction) from JEC’s conductors, including the system neutral.
- 8.6 When working on the floor of unmaintained areas any brush less than 3 feet in height will be left and will be sprayed the year after work on this circuit is complete. Any brush higher than 3 feet must be cut during work on that circuit.
- 8.7 As designated by the authorized Jackson Energy representative **fruit bearing trees** that remain within the right-of-way shall be trimmed not removed in accordance to the Jackson Energy right-of-way clearing guidelines unless otherwise notified by the property owner.
- 8.8 Existing right of way consisting of primary lines shall be cleared to meet the clearance standards below. If the existing Right-of-Way is in such condition that the clearances below are already achieved then no work is needed. In the event that the right-of-way clearance is not sufficient then work will progress in accordance with these specifications. Normal right of way widths are as follows:

- a.) Three-Phase Primary lines - 40 ft.

b.) Single-Phase Primary lines - 30 ft.

- 8.9 Secondary lines and Individual services will not be the responsibility of the Contractor on Circuit bids. Secondary circuits include all right-of-way between the Jackson Energy owned pole with transformer and the final Jackson Energy owned pole. Clearing of secondary services will be the responsibility of the landowner unless a hazardous situation exists that would not allow them to maintain those lines. If such a hazard exists a service man will be dispatched to trim enough to allow swing clearance of the secondary wire. If a landowner requests to remove a tree near a service wire, JEC will temporarily take down the wire while the landowner resolves the removal of the tree in question.
- 8.10 All overhead guy stubs, anchors, and riser poles, shall be cleared of all vines and vegetation to allow reasonable access to that facility for maintenance and serviceability. Generally this would include the area within 5 feet of the pole or equipment.
- 8.11 Unless otherwise specified by JEC, all removals shall be as close to the ground as the topography and type of soil will allow, with a maximum remaining height of three (3) inches for brush stubs and three (3) inches for tree stumps. Stumps resulting from circuit clearing will **NOT** need to be treated due to spray work scheduled for the following year. Actual product to be used must be approved by Jackson Energy. Applicators must be licensed by the Kentucky Department of Agriculture. The contractor assumes any and all liability that may arise as a result of the misapplication of the cut stump treatment. All communications concerning notifications and refusals of cut stump herbicide applications must be recorded in the written daily log kept by the contractor and referenced to the specific property in question
- 8.12 Mechanical Clearing and Re-Clearing work will be permitted where applicable. After any mechanical operation, if any damages to property exist, the Contractor shall restore the land to the natural contour existing prior to the start of the work (i.e. ruts caused by machinery). This must be accomplished to the satisfaction of Jackson Energy and the landowner.
- 8.13 All work is to be performed under the supervision of the contractor. Work shall be conducted in a manner such that all phases of the clearing and/or reclearing work shall progress concurrently, (i.e., cutting, disposal and final cleanup). Jackson Energy has the sole authority to designate the class of right-of-way. If any recent right-of-way clearing/reclearing is encountered, and it does not conform to these specifications, it must be included in the bid.
- 8.14 Disposal of operation wood residue such as brush, wood, large sections of tree trunks, large limbs, wood chips, and other such products produced or generated by this operation on the JEC system shall not obstruct roads, paths, or waterways. Disposal of said residue shall be the sole responsibility of the Contractor and at

approved locations. All disposal costs shall be included in the cost submitted on the JEC bid. When approved by property owners, logs and brush may be left "wind-rowed" along the outer edges of the right of way. In general, unless otherwise approved by the property owner, the premises of the property owner shall be left as neat as before the Work started.

- 8.15 Disposal of wood from **Urban areas** and or **Yards** will consist of the clean up of all brush and large wood will be cut and stacked. **The Contractor will not be responsible for the removal of large wood.** Cleanup of wood resulting from the removal of a tree will be the responsibility of the landowner. The area will be left in a neat fashion as it was before work was completed unless otherwise instructed by the property owner. Disposal of wood and brush in **Unmaintained Right of Ways** will consist of wind rowing the brush and wood to the outer edge of the right of way.
- 8.16 Members requesting **Timber** of a merchantable size to be left will be cut in lengths of 100 inches unless otherwise specified by the landowner. The timber will be piled on the edge of the right of way and will become the responsibility of the landowner to remove.
- 8.17 Any dead trees or trees deemed to be a hazard even if beyond the right of way, which would strike the line in falling, shall be removed. Contractors are also responsible for any hazardous trees missed upon inspection and will be sent back to remove these hazards. (*Hazard trees may include but not limited to dead or dying trees, trees with visible cankers or rots, severe leaning trees, and trees with severe animal or mechanical damage showing signs of rot*).
- 8.18 Vines on poles, guy wires, and equipment shall be removed and cut off at ground level and the area surrounding the pole and/or equipment.

Section 9.0 Options for Refusals/Reluctance to Yield Right-of-Way

- 9.1 Options to modify right-of-way clearing may be offered to individual landowners or groups of adjacent landowners that object to clearing according to the standards indicated by the Jackson Energy right-of-way program. In providing these options, Jackson Energy seeks to enable individual members to choose methods for right-of-way clearance that best address their concerns while preventing the burden of costs for use of non-standard procedures from being placed upon Jackson Energy members as a whole.

Because of varying site conditions, not all options will be offered in all locations. Options that may be available for a particular site include:

Grinding of stumps:

Stump Grinding will not be used on the JEC system unless authorized by a representative of JEC. If any stump grinding is utilized by JEC the Contractor will be compensated at an hourly rate.

Relocation of lines:

Where consistent with Jackson Energy standards for line maintenance/improvement, rerouting of lines or moving lines underground at the member's expense will be considered. Rerouting must follow Jackson Energy guidelines, and accessibility to the lines must be as good as or better than at the original location. In locations where groups of landowners must agree to rerouting, it is the responsibility of the interested landowners to negotiate agreement with adjacent landowners and obtain necessary easements before rerouting can proceed. If such agreement cannot be obtained within a time frame specified by Jackson Energy, right-of-way clearing will proceed unless other options are negotiated individually with Jackson Energy.

Replacement Tree Voucher:

Subject to agreement with the landowner, Jackson Energy may assume or share reasonable costs for providing a voucher for member to purchase a replacement tree. Trees/shrubs must be replaced with an approved species planted at an appropriate distance from the lines and members are responsible for their care. Jackson Energy reserves the right to limit quantities of replacement tree vouchers and no more than one replacement voucher will be allowed per member/location.

Section 10.0 Use of Chemicals and Sprays

- 10.1 The Contractor shall ensure that the on-site applicator be certified by the Kentucky Department of Agriculture, Division of Pesticides. Only certified applicator(s) may apply herbicide on Jackson Energy right-of-way. Copies of applicators licenses shall be given to Jackson Energy prior to starting any projects.
- 10.2 All herbicides used by the contractor shall be approved by Jackson Energy and used in accordance with the manufacturer's specifications on the label. Herbicides with a National Fire Protection Association (NFPA) health rating of 3 or greater shall not be used on Jackson Energy's system unless specifically approved by Jackson Energy. Contractor shall be responsible for purchasing, storing, and furnishing chemicals to its crews.
- 10.3 There will be no herbicide application on National Forest or other State or Federally owned lands unless authorized with proper permits and authorization from the proper manager of those lands.

- 10.4 All herbicide treatment crews shall have the ability to perform foliar and basal chemical treatment where applicable. All grasses, ferns, herbaceous plants, annual weeds, and annual plants, and those compatible non-woody species shall not be treated unless directed to do so by the authorized representative.
- 10.5 Treatment Around Poles and Guy Wire Attachments - Cut off all vines ascending all poles and guy wires at the height of reach. Treat with herbicides all vines below cutting and other vegetation, which may interfere with Jackson Energy's facilities from all poles and guy wires. In the case of kudzu vines, Jackson Energy must be notified within 2 days of the existence of this condition, in order for us to place kudzu guards the pole and guide wires.
- 10.6 Herbicide treatment of right of way may be done at various locations using suitable herbicides to control vegetation particular to that location. Detailed records of the applicator's name, property owner permission, date, location, amount and type of herbicide used shall be kept and copies furnished to JEC on a routine basis or upon completion of the job. Prior to commencement of any Work involving the application of chemicals, the Contractor shall thoroughly familiarize and inform himself of all local conditions and other factors which could or might affect herbicide treatment.
- 10.7 Unless otherwise specified by JEC, the Contractor shall mix and apply the herbicides in accordance with the recommendations of the manufacturer's label and the following general specifications:
- (a) For Foliage Application: This method shall be used only on brush during the active plant growth period, generally between May 1 and September 1. Herbicide mixture shall be applied to completely wet the entire leaf, stem and trunk surface of each plant.
 - (b) For Basal Application: This method shall be used on brush of any size at any season of the year. Herbicide mixture shall be applied to completely wet the entire surface of the stem or trunk from the root-crown up the stem eighteen (18) inches, with emphasis on completely wetting the root-crown.
 - (c) For Stump Application: This method shall be used on all new stumps at any season of the year. Stumps shall be treated as soon as practical, but always on the same day that the cutting is performed. Herbicide mixture shall be applied in sufficient volume to completely wet the sapwood, the area around the outer edge of stump.
- 10.8 Contractor shall not be obligated to treat any portion of a line where damages to crops, orchards, or ornamental plants may result from chemical drift.
- 10.9 JEC will have the right to specify when and where herbicide application and/or herbicide treatment will be used in rural areas or otherwise.
- 10.10 Contractor's use of herbicides in connection with the Work shall be in strict compliance with all federal and state laws, rules and regulations which from time

to time govern the use of herbicides. By undertaking to perform any part of the Work in which chemicals are used, the Contractor certifies that Contractor is familiar with, has complied with, and at all times will comply with all requirements (including but not limited to those relating to training and the giving and posting of all required notices) under all of the foregoing laws, rules and regulations and further, the Contractor shall indemnify and hold harmless Jackson Energy and its directors, officers, employees and agents from and against any liability, claim, demand, cause of action of every kind and description, damage, losses and expenses, including attorney's fees through appeals, arising or resulting from the Contractor's non-compliance with or violation of any of the foregoing laws, rules or regulations.

- 10.11 Chemical spills shall be immediately cleaned-up in a manner consistent with label restrictions, Federal and State regulations, and acceptable environmental procedures mandated by law. Any and all notifications to proper authorities in connection with such spills shall be made by the Contractor. Each crew responsible for herbicide applications shall be supplied with a suitable spill response kit for cleaning-up and neutralizing spills of chemicals, all at the sole expense of the Contractor. Contractor shall insure that its employees are trained in the proper techniques for spill response, and are supplied with the necessary personal protective equipment required to perform spill mitigation duties.
- 10.12 Contractor shall at all times be solely responsible for the continuous safeguarding of its workforce, including compliance with all applicable Federal, State, and local laws, together with its responsibilities for training its employees in the proper methods and use of personal protective equipment required for handling herbicides used in connection with this Work.

Section 11.0 Safety to Employees and the Public

- 11.1 The contractor shall obtain full information from Jackson Energy as to the voltage of its circuits before starting the various parts of the work.
- 11.2 The Contractor shall at all times conduct the work in a manner as to safeguard the public from injury to persons or property, and shall comply with the regulations set forth in OSHA 1910.269, OSHA 1910.331, OSHA 1910.266 Logging Standard and ANSI Z133.1 – 1994. All provisions of Jackson Energy safety policy, as detailed in the Jackson Energy Safety Manual, further apply to all contractors on Jackson Energy.
- 11.3 The contractor shall use all necessary protection for its employees and to guard against interference with the normal operation of the circuits. If, in the judgment of the Contractor's General Foreman/Supervisor, it is hazardous to trim or remove trees with the circuits energized, the authorized Jackson Energy representative(s) shall be contacted. If deemed appropriate, the necessary protection or de-

energizing the circuits will be provided by Jackson Energy to ensure the safe removal of the affected tree parts.

- 11.4 Should the Contractor knock down or come in contact with Jackson Energy's conductors, Jackson Energy's main office must be notified immediately. The following telephone number shall be used: 1-606-364-1236, directing the call to "Dispatch".
- 11.5 When applying herbicides, the contractor shall at all times take all reasonable precautions for the safety of employees on the work and of the public by utilizing safety equipment and methods in accordance with the manufacturer's specifications on the herbicide label. Contractor shall comply with all applicable provisions of Federal, State, and local laws specifically including 302 KAR Chapters 27, 28 and 29 relating to the use and application of herbicides. Contractor will furnish copies of any required licenses, certifications or permits to Jackson Energy upon request.

Section 12.0 Work Assignments

- 12.1 The Contractor shall advise JEC on a daily basis as to the location of all crews, any and all crew movements throughout the day, the progress of the Work assigned, and any problems or unusual occurrences. JEC will provide the Contractor with necessary copies of JEC's system maps to aid in routing crews throughout our service area.
- 12.2 Contractor shall make available its crews for emergency work as determined by JEC, day or night, weekends, holidays, or during any natural disasters such as ice or snow storms, tornadoes and other strong storms, etc. Contractor shall furnish an emergency work price list to JEC along with their bid. Contractor shall furnish JEC the name and telephone number of the person to contact for emergency crews. Contractor may be asked to assign additional crews to JEC's system if the emergency is severe or of long duration.
- 12.3 Contractor shall submit to JEC a progress report at the end of each week containing the following information:
 - (a) Each crew's work location and the progress report for each crew
 - (b) The areas sprayed and/or bush-hogged
 - (c) The quantity and type of each unit cut by each crew
- 12.4 Reasonable working hours shall be utilized for lump sum cost for circuit work. Contractor shall be free to determine working days and hours to suit his needs with the following exceptions. There shall be no work on Saturday or Sunday and on JEC designated holidays without approval by a designated JEC representative. In general, the normal workweek for lump sum work should consist of forty (40) productive hours between 7:00 a.m. and 6:00 p.m., Monday through Friday, unless

otherwise approved by JEC. The workday shall begin at the designated assembly location and end at the work site.

- 12.5 Jackson Energy properties will not be made available for the Contractor for crew starting points or for storing/garaging tools or equipment, unless authorized by the Jackson Energy representative.
- 12.6 JEC shall not be charged for time spent on maintenance of equipment, including without limitation fueling of vehicles, oil or antifreeze changes, changing and/or sharpening of chipper blades, and other similar maintenance and repair work. JEC will not render payment for equipment that is incapable of fully performing its intended function. Minor mechanical repairs such as sharpening and adjusting chain saws shall be permitted on JEC time.

Section 13.0 Supervision of Work and Workmanship

- 13.1 Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, and procedures.
- 13.2 **Contractor is an independent contractor and neither Contractor nor any of its employees shall be deemed to be agents or employees of JEC.**
- 13.3 The Contractor shall give prior notification of work start-up and when adding or changing crew. Complete the necessary reporting forms as needed. All reports, logs, timesheets, and paperwork shall be accurate, neat, and complete. Exaggerated, padded, or incorrect work report entries may result in the dismissal of the crew foreman and/or general foreman/supervisor. The crew foreman and/or supervisor shall maintain an up-to-date log of all property owner notification and/or refusals.
- 13.4 Contractor shall provide and maintain continually on the site of the Work during its progress and until its completion, adequate and competent supervision of all operations for and in connection with the Work being performed under this Contract, either personally or by a duly authorized representative. The General Foreman or other representative of the Contractor, who has charge of the Work thereof, shall be fully authorized to act for the Contractor and to receive whatever orders as may be given for the proper execution of the Work or notices in connection therewith.
- 13.5 Contractor shall employ only workers who are competent to perform the Work assigned to them and who are adequately trained and experienced in performing first-class Work of the character and magnitude required by this Contract and expected of reputable Contractor's performing work similar to the Work necessary under this Contract.

- 13.6 JEC will periodically review and evaluate crew performance based upon factors such as, but not limited to, quality of work, quantity of work, clearances obtained, safety awareness and public relations efforts.
- 13.7 Contractor shall be required to attend regular progress meetings with JEC to discuss the Work of this Contract, review crew evaluations, receive information as to future work locations for planning purposes and discuss any problems in prosecuting the Work under this Contract.

Section 14.0 Contractor Caused Outages

- 14.1 Anytime the Contractor feels that work can not be completed safely or an outage due to work associated with the clearing of the right of way is unavoidable he should ask for an outage to be scheduled by our line crews. We will have no problem with scheduling an outage to make the job safe.
- 14.2 Should the Contractor knock down or come in contact with Jackson Energy's conductors, Jackson Energy's main office must be notified immediately. The following telephone number shall be used: 1-606-364-1236, directing the call to "dispatch".
- 14.3 There will be a minimum charge of \$200 dollars for each Contractor caused outage for restoration costs. If the amount of restoration costs exceeds \$200 then the total amount for restoration will be charged to the Contractor.
- 14.4 If a Contract Crew causes an outage, that entire crew will not be allowed to work on the JEC system for 1 business day following the day of the outage. This will allow the contractor and JEC sufficient time to investigate and take any necessary actions to insure future outages will be avoided.

Section 15.0 Payment for Work

- 15.1 The Contractor will be compensated for trimming at the fixed rate(s) designated in the bid. The Owner shall make a partial payment of 25% to the Contractor once one fourth of the Project has been inspected and approved. Another payment of 25% will be paid when one half of the project is completed and another 25% at three fourths of completion. The final payment will only be made at the end of the Project and only after the work has been inspected and approved. Invoices should be sent to the attention of: **Mr. Eric Glovier 115 Jackson Energy Lane McKee, Kentucky, 40447.**
- 15.2 Contractor(s) shall keep accurate records of its compensation at its principal office which will be available for audit by JEC during regular office hours.

- 15.3 The Contractor will be required to utilize daily time sheets provided by or approved by Jackson Energy. Timesheets shall be accurate, neat and complete, and shall detail time charged to individual work and service orders.
- 15.4 In order to receive payment for any **Combination Lump Sum/Unit Price** bid work the Contractor must supply with invoices a weekly detailed list of units cleared or trimmed and the location of these units. Inspection for accuracy shall be done by a representative of JEC before payment.

Section 16.0 Hazard Tree Mitigation Project

- 16.1 Jackson Energy has started a Hazard Tree Mitigation Project to address the issue of trees falling from outside of the right of way and still contacting power lines. For this project Jackson Energy is inspecting circuits that have a high number of outages from outside of the right of way. Trees to be marked during this inspection include all hazard trees that will strike the line if it falls whether inside or outside of the right of way. Hazard trees will include and tree that is dead, dying, decaying, or has severe lean towards any primary line. Once identified any hazard trees that are found will be removed by our contract right of way crews by bid work or hourly work.

Section 17.0 Indemnification

To the maximum extent permitted by law, Contractor shall defend, indemnify, and hold harmless Owner and Owner's directors, officers, and employees from all claims, causes of action, losses, liabilities, and expenses (including reasonable attorney's fees) for personal loss, injury, or death to persons (including but not limited to Contractor's employees) and loss, damage to or destruction of Owner's property or the property of any other person or entity (including but not limited to Contractor's property) in any manner arising out of or connected with the Contract, or the materials or equipment supplied or services performed by Contractor, its subcontractors and suppliers of any tier. But nothing herein shall be construed as making Contractor liable for any injury, death, loss, damage, or destruction caused by the sole negligence of Owner.